PATENT ABSTRACTS OF JAPAN

(11)Publication number: 2003-006342
(43)Date of publication of application: 10.01.2003

(51)Int.Cl. G06F 17/60

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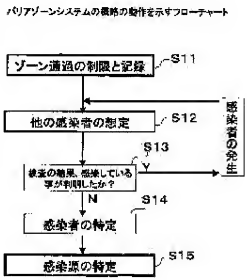
(54) METHOD, PROGRAM AND DEVICE FOR PREVENTING IN-HOSPITAL INFECTION

(57)Abstract:
PROBLEM TO BE SOLVED: To prevent in-hospital infection.
SOLUTION: A gate control client 12 controls zone passage and records passers (Fig. 4 and S11). When a person is found infected, persons who are suspected of having infected secondarily are picked out from a record of zone passage 17 (S12). A test is performed of the person with strong possibility of having infected to check whether he or she has, in fact, infected or not (S13). From this test result and records of entry into the rooms, the source of infection is specified (S15).



CLAIMS

[Claim(s)]

[Claim 1]A hospital infection preventing method managing personal information of a visitor to medical facilities, dividing medical facilities into two or more barrier zones, setting up entrance conditions for said every barrier zone, and restricting entrance into a room to said barrier zone of said visitor based on said personal information and said entrance conditions.

[Claim 2]Manage personal information of a visitor to medical facilities, and medical facilities are divided into two or more barrier zones, A hospital infection preventing method characterized by assuming an infection pseudopositiveness person based on said infected person's entrance record, and said visitor's entrance record when entrance into a room of said visitor to each barrier zone is recorded and an infected person is reported.

[Claim 3]A hospital infection preventing method characterized by assuming the source of infection from two or more infected persons' entrance record when manage personal information of a visitor to medical facilities, medical facilities are divided into two or more barrier zones, entrance into a room of said visitor to each barrier zone is recorded and an infected person is reported.

[Claim 4]A hospital infection preventing method recording the contents of a therapy to a patient, extracting the contents of a therapy common to a case where an infected person is reported, at two or more infected persons' contents of a therapy out of said patient, and assuming the source of infection from said extracted contents of a therapy.

[Claim 5]The hospital infection preventing method according to claim 1 characterized by assuming an infection pseudopositiveness person based on said infected person's entrance record, and said visitor's entrance record when an infected person is reported.

[Claim 6]The hospital infection preventing method according to claim 1 characterized by assuming the source of infection from two or more infected persons' entrance record when an infected person is reported.

[Claim 7]Manage personal information of a visitor to medical facilities, and medical facilities are divided into two or more barrier zones, A hospital infection preventing method

extracting an entered person to a barrier zone assumed to be the source of infection from two or more infected persons' entrance record supposing the source of infection from entrance record, and assuming an infection pseudopositiveness person when entrance into a room of said visitor to each barrier zone is recorded and an infected person is reported.

[Claim 8]A function to manage personal information of a visitor to medical facilities, and when medical facilities are divided into two or more barrier zones, A hospital infection preventive program which realizes a function to restrict entrance into a room to said barrier zone of said visitor based on a function to set up entrance conditions for every barrier zone, and personal information and said entrance conditions and in which computer execution is possible.

[Claim 9]A function to manage personal information of a visitor to medical facilities, and when medical facilities are divided into two or more barrier zones, A hospital infection preventive program which realizes a function which records entrance into a room of said visitor to said barrier zone, and a function to assume an infection pseudopositiveness person based on said infected person's entrance record, and said visitor's entrance record when an infected person is reported and in which computer execution is possible.

[Claim 10]A hospital infection prevention device comprising:

A setting-out means to set up entrance conditions to a barrier zone when medical facilities are divided into two or more barrier zones.

A control means which restricts entrance into a room to said barrier zone of said visitor based on medical facilities' personal information and said entrance conditions of a visitor.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]This invention relates to the program for preventing the preventing method of the hospital infection in medical facilities, and a hospital infection, the recording medium which recorded the program, and a hospital infection prevention device.

[0002]

[Description of the Prior Art]In medical facilities, there are many opportunities for many persons, such as a visitor of an outpatient, an inpatient, and an inpatient and a medical staff, to move inside the House, and for those persons to contact. Since there are some persons who hold bacteria, a virus, etc. also in the person, inpatient, or medical staff who visits from the outside, when those who hold bacteria, a virus, etc. contact those to whom immune activity is falling, a possibility of suffering from an infectious disease those to whom immune activity is falling is high.

[0003]When clothes, such as health care professionals, such as a medical practitioner and a nurse, the personnel of a mess hall of the House, and authorized personnel, and the instrument to be used are polluted by bacteria etc., a patient, health care professionals, etc. may be infected. The medical instrument used for a therapy or an inspection is polluted, and a hospital infection may occur.

[0004]As a measure against such a hospital infection, grasping the infection situation in a hospital is proposed, for example in JP,7-79929,A. This invention enables it to grasp distribution of the germ carrier of a strain who inspected and specified infection situations, such as an inpatient, a medical practitioner, and a nurse, of the House.

[0005]

[Problem(s) to be Solved by the Invention]However, though distribution of the germ carrier of a specific strain of the House can be known by the above-mentioned invention, thereby, a hospital infection cannot be prevented.

[0006]Conventionally, there were the following problems about a hospital infection.

(1) Since the behavior range of an infected person and a stranger cannot be restricted,

infection will be expanded by contact with an infected person, air borne infection, infection through a thing, etc.
(2) Since there is no method of specifying the high person of the possibility of infection when an infected person is reported, infection will be expanded while inspecting all target persons.
(3) Since there is no method of pinpointing the source of infection when a hospital infection occurs, infection will be expanded by the ability not to take a prompt action.
[0007]The technical problem of this invention is preventing a hospital infection. Other technical problems are enabling it to assume exactly people with the source of infection of a hospital infection, or the possibility of infection.
[0008]
[Means for Solving the Problem]A hospital infection preventing method concerning this invention manages personal information of a visitor to medical facilities, divides medical facilities into two or more barrier zones, sets up entrance conditions for every barrier zone, and restricts entrance into a room to said barrier zone of said visitor based on said personal information and said entrance conditions.
[0009]According to this invention, entrance into a room of a visitor from the outside to a specific barrier zone can be restricted, for example by keeping a visitor who does not fulfill entrance conditions set as a barrier zone from putting into a barrier zone, and hospital infections, such as a low patient of immune activity, can be prevented. Other visitors' secondary infection can be prevented with restricting a barrier zone where an infected person can enter a room.
[0010]Other hospital infection preventing methods concerning this invention manage personal information of a visitor to medical facilities, When medical facilities are divided into two or more barrier zones, entrance into a room of said visitor to each barrier zone is recorded and an infected person is reported, an infection pseudopositiveness person is assumed based on said infected person's entrance record, and said visitor's entrance record.
[0011]According to this invention, when an infected person is reported, a high person of a possibility of being infected directly or indirectly can be extracted from that infected person as an infection pseudopositiveness person. Therefore, by narrowing down a person to be examined, an infected person can be detected in a short time, and expansion of infection can be prevented.
[0012]Other hospital infection preventing methods concerning this invention assume the source of infection from two or more infected persons' entrance record, when manage personal information of a visitor to medical facilities, medical facilities are divided into two or more barrier zones, entrance into a room of said visitor to each barrier zone is recorded and an infected person is reported.
[0013]According to this invention, two or more infected persons can assume the source of infection from record of a barrier zone which entered a room in common with a case where

an infected person is reported. This pinpoints a high place of the possibility of the source of infection, and expansion of infection can be prevented by interception of the source of infection, etc.

[0014]0ther hospital infection preventing methods concerning this invention record the contents of a therapy to a patient, extract the contents of a therapy common to a case where an infected person is reported, by two or more infected persons' contents of a therapy out of said patient, and assume the source of infection from said extracted contents of a therapy.

[0015]When it is infected with drugs prescribed by patient or a medical device used for a therapy, for example according to this invention, Since a high thing of the possibility of the source of infection can be narrowed down by extracting drugs common to an infected person, a medical device, etc., the source of infection is pinpointed for a short time, and expansion of a hospital infection can be prevented.

[0016]E ntrance conditions are set up for every barrier zone, and it may be made to restrict entrance into a room to a visitor's barrier zone further based on personal information and entrance conditions in an above-mentioned prevention-of-transmission method of assuming an infection pseudopositiveness person or the source of infection.

[0017]When the possibility of infection from an infected person or a stranger can be reduced by restricting an entered person for every barrier zone and an infected person is reported, a secondary infection person or the source of infection can be pinpointed at an early stage.

[0018]0ther hospital infection preventing methods concerning this invention manage personal information of a visitor to medical facilities, When medical facilities are divided into two or more barrier zones, entrance into a room of said visitor to each barrier zone is recorded and an infected person is reported, an entered person to a barrier zone assumed to be the source of infection from two or more infected persons' entrance record supposing the source of infection is extracted from entrance record, and an infection pseudopositiveness person is assumed.

[0019]According to this invention, when an infected person is reported, a high person of the possibility of infection from entrance record to that barrier zone can be further extracted from an infected person's entrance record supposing a high barrier zone of the possibility of the source of infection. Thereby, by inspecting to cover of the source of infection, or an infection pseudopositiveness person, an infected person can be detected in a short time, and expansion of a hospital infection can be prevented.

[0020]

[E mbodiment of the Invention]Hereafter, an embodiment of the invention is described, referring to drawings. Drawing 1 is a figure showing the system configuration of a barrier zone system based on the hospital infection preventing method of an embodiment of the invention, and drawing 2 is a figure showing various kinds of information that it is used with a barrier zone system.

[0021]This barrier zone system publishes IC card 10 to a visitor including the authorized personnel in the outpatient of a hospital, an inpatient, a visitor, a medical staff, and a hospital, etc., and records each person's personal information 13 on that IC card 10 beforehand. IC card 10 is a card of a noncontact type, and has a transmitting function of a radio signal, for example.
[0022]The input of the personal information 13 on IC card 10 inputs the name of a disease etc. by ** which is consulting about the patient, and in the case of a visitor, when it publishes IC card 10 for visitors by receptionist, it inputs them.
[0023]IC card reader 11 (drawing 3) by which a barrier zone system is installed in the entrance of each barrier zone, The gate control client 12 which manages an entered person, and the barrier system server 18 which manages the personal information 13 and the information on the judgment parameter 14 grade which defined entrance conditions, It consists of the ordering system server 20 which manages order data, such as a prescription and a therapeutic method, the prevention-of-transmission client 21 which manages the information for prevention of a hospital infection, and of the House LAN 22 which connect those devices and enable it to transmit and receive data.
[0024]The gate control client 12 performs control which restricts entrance into a room based on a visitor's personal information 13 read by IC card reader 11 by radio, and the judgment parameter 14 which defined the entrance conditions to the barrier zone.
[0025]The judgment parameter 14 with which the barrier zone system server 18 defined the personal information 13 of a patient, a visitor, etc., and entrance conditions, the zone information 15 which set the shelf-life of a zone name, a place, and its zone, the infection condition information 16 which shows the kind and each infection condition of an infectious disease, a zone number, The zone accumulation record 17 which consists of a decision result, passage time, etc. of ID of the visitor who tried to enter a room, and the propriety of entrance into a room is managed.
[0026]The ordering system server 18 manages the order data 19 which show a patient's contents of a therapy (a prescription, examination contents, etc.). Next, drawing 3 shows the state when the inside of a hospital is divided into two or more barrier zones. IC card reader 11 is installed in the entrance of each barrier zone, and those who want to enter a barrier zone make IC card reader 11 read the information on one's IC card 10. The gate control client 12 judges whether the person who made IC card 10 read by non-contact can enter a room based on the judgment parameter 14 which defined the entrance conditions to the personal information 13 and the barrier zone which were recorded on IC card 10.
[0027]Next, drawing 4 is a flow chart which shows operation of the outline of the barrier zone system of an embodiment. The gate control client 12 of each barrier zone restricts zone passage, and it records a passage person (drawing 4, S11). When an infected person is reported, those who have the possibility of secondary infection from the zone passage record 17 are assumed (S12). It is distinguished whether it became clear that it was infected as a result of the inspection to the possible person of secondary infection who

assumed (S13).
[0028]When it becomes clear that it is infected as a result of an inspection, it returns to Step S12 and inspects again supposing those who may be infected from a secondary infection person. At Step S13, when infection does not become clear, or when a secondary infection person is detected and an infected person does not become clear by subsequent inspection, it progresses to Step S14 and an infected person is specified. The source of infection is pinpointed from two or more infected persons' zone accumulation record 17 (S15).
[0029]Hereafter, the processing which restricts entrance into a room based on the conditions of the judgment parameter 14, processing supposing an infection pseudopositiveness person, processing supposing the source of infection, etc. are explained, referring to drawing 5 - drawing 13.
[0030]Drawing 5 is a flow chart of the processing which restricts the entrance into a room to a barrier zone. If those who are going to enter a barrier zone make IC card reader 11 read the information on IC card 10 by non-contact, an individual ID code will be read in IC card 10, and the zone passage record which consists of an individual ID code, a zone code, etc. will be sent to the gate control client 12.
[0031]If zone passage record is received (drawing 5, S21), the gate control client 12 will search the zone information file which has managed the barrier zone system server 18 by using a zone code as a key, and will become final and conclusive the place of a zone (S22).
[0032]Next, the personal information file which has managed the barrier zone system server 18 by using an individual ID code as a key is searched, and an individual attribute (attribute which shows distinction of an inpatient, an outpatient, a visit, a contractor, etc.), the zone where entrance into a room is forbidden, and the infection information which shows the contents of infection are acquired (S23).
[0033]The judgment parameter 14 which defined the entrance conditions to the zone specified by zone ID is acquired from the barrier zone system server 18, and it is judged whether the entrance into a room to the barrier zone is permitted (S24).
[0034]When those who are going to enter a room do not fulfill entrance conditions, it progresses to (S24, NO), and Step S25, and it tells that a room cannot be entered by a sound, or zone penetration inhibition processing of closing a gate is performed.
[0035]On the other hand, when the entrance into a room to a barrier zone is permitted, it progresses to (S24, YES), and Step S26, and it transmits to the barrier zone system server 18, and zone ID, an entered person's individual ID, a place, entrance time, and recession time are made to record on the zone accumulation record 17.
[0036]Drawing 6 is an explanatory view of the processing which restricts the entrance into a room to a barrier zone. Drawing 7 (A) - (C) is a figure showing an example of the judgment parameter 14. As zone passage record is shown in drawing 6, it consists of a year when the individual ID code read in IC card 10, a zone code (drawing 6 "0011"), and

the data of IC card 10 are read, the moon, a day, and time, and these information is transmitted to the gate control client 12.

[0037]The zone information 15 consists of a zone code, information, including for example, a nursery, ICU, etc., which shows the place of the zone in a hospital, and the start period and end period which become effective [the zone]. By changing the information which shows the place of the zone of this zone information 15, even when there are change of arrangement of the barrier zone in a hospital, etc. The zone accumulation record 17 before setting out of the judgment parameter to the barrier zone of new arrangement or change and the zone accumulation record 17 after change can be associated.

[0038]The personal information 13 consists of individual ID, a name and an attribute (exceptions, such as an inpatient, an outpatient, a visit, and a contractor), affiliation (** which consults), the name of a disease, a zone where entrance into a room is forbidden, and an infected infectious disease name.

[0039]As the judgment parameter 14 is shown in drawing 7 (A) - (C), a patient, a visitor, and the conditions to which entrance into a room is forbidden for every contractor are recorded. About a patient, as shown in drawing 7 (A), it is forbidden by entrance into a room by a patient's conditions, and for example, the person of slight infectious diseases, such as cold, The conditions that a room cannot be entered are set to a nursery and ICU, and the conditions that the person of serious infectious diseases, such as tuberculosis, can enter no barrier zones, such as a restaurant of the House, a stand, a barber shop (beauty parlour), and a nursery, are set up. The conditions that those who have received dietary restriction of an inspection or diabetes mellitus cannot enter a restaurant and a stand are set up.

[0040]About a visitor and a personal valet, as shown in drawing 7 (B), the conditions which I get to notify whether it suffers from an infectious disease at the time of admission, or determine the propriety of the entrance into a room to each barrier zone from the past admission record are set up. For example, the conditions that the person concerning slight infectious diseases, such as cold, cannot enter a nursery and ICU are set up.

[0041]About the contractor who frequents a hospital, as shown in drawing 7 (C), the conditions which determine the propriety of entrance into a room by whether each person is suffered from an infectious disease like a visitor are set up.

[0042]The gate control client 12 judges whether the personal information 13 and the judgment parameter 14 of those who are going to enter a room are compared, and those who are going to enter a room fulfill the entrance conditions specified with the judgment parameter 14.

[0043]When those who are going to enter a room do not fulfill the entrance conditions of the barrier zone, it tells that a room cannot be entered by processing of closing a sound or a gate, and the information which shows that individual ID and a decision result cannot enter a room is recorded on the zone accumulation record 17.

[0044]When a room can be entered, the zone code of a barrier zone, individual ID of the

person who entered a room, a place, entrance time, leaving time, and a decision result are recorded on the zone accumulation record 17. The above processings can restrict the entrance into a room to specific barrier zones, such as the person and stranger who were suffered from an infectious disease, a person before an operation, and those who have received dietary restriction. The low newborn infant of immune activity and the patient of ICU can be prevented from doing secondary infection by this. Since the person under dietary restriction can restrict entering a stand etc., those persons can be prevented from taking in a restriction article. The patient before an operation can be prevented from being infected with saprophytic bacteria etc. with restricting that the patient before an operation enters a barber shop etc.

[0045]Next, drawing 8 is a flow chart of the processing which assumes the high person (infection pseudopositiveness person) of the possibility of secondary infection from the infected person, when an infected person is reported in a hospital. If an infected person is reported, individual ID and infection classification of the infected person will be inputted from the input device of the prevention-of-transmission client 21 (drawing 8, S 31). The infection condition information 16 applicable considering the inputted infection classification as a key is read, and the zone accumulation record 17 of a person further applicable considering individual ID as a key is read from the barrier zone system server 19 (S 32).

[0046]After the infection doubt conditions over a zone, i.e., an infected person, enter the zone from the read infection condition information 16, the zone conditions which provided when the person who entered a room within between might be infection are extracted (S 33).

[0047]Next, it extracts from the zone accumulation record 17 by making into an infection pseudopositiveness person those who have the possibility of infection by the infection condition information 16, and the list display of the infection pseudopositiveness person is carried out, and the first infection pseudopositiveness person is extracted as a subject of examination (S 34).

[0048]It inspects to an infection pseudopositiveness person and it is judged whether all inspections of a positivity, negativity, it, and an object patient were completed from the inspection result (S 35). When an inspection result is netative, it progresses to S tep S 36, the person is excluded from an infection pseudopositiveness patient, and the next infection pseudopositiveness patient's ID is set.

[0049]When an inspection result is positive (i.e., when carrying out secondary infection), it progresses to S tep S 37, the positive patient's individual ID is set as infected person ID, and processing after S tep S 32 is performed again.

[0050]That is, when those who are considered to have carried out secondary infection are discovered, the high infection pseudopositiveness person of the possibility of infection is extracted from the barrier zone where the patient who investigated and did secondary infection of the person's zone accumulation record 17 entered a room. And it inspects to the infection pseudopositiveness person, and it is judged whether the infection

pseudopositiveness person is infected.
[0051]When an infected person is reported by the above-mentioned processing inside the House, the high infection pseudopositiveness person of the possibility of secondary infection can be narrowed down by the zone accumulation record 17, and an infected person can be promptly discovered by inspecting to the infection pseudopositiveness person. Since the high infection pseudopositiveness person of the possibility of infection can be further extracted and inspected from the infection pseudopositiveness person's zone accumulation record 17 when an infected person is discovered out of the infection pseudopositiveness person who inspected, an infected person can be discovered promptly and expansion of a hospital infection can be prevented.
[0052]Drawing 9 is an explanatory view of the processing which assumes an infection pseudopositiveness person from the infection condition information 16 and the zone accumulation record 17. The zone conditions (for example, [simultaneous, 30 minutes, and 6 hours after etc.]) which indicate it to be the classification of an infectious disease whether the person who entered within between the zone where the infected person entered a room when may be infection to the infection condition information 16, When the candidate for infection is limited to a specific zone, the information which shows an applicable zone is set up. It is shown that x which shows that O of the infection condition information 16 and ** have the possibility of infection does not have the possibility of infection. The zone accumulation record 17 of drawing 9 is the same as drawing 6.
[0053]For example, clarification of that the person of individual ID "991" is maintenance of an influenza virus will extract the person who entered the time which fulfills the infection conditions of the infection condition information 16 to the barrier zone where the patient entered a room from the zone accumulation record 17. In this case, since the person of individual ID "123" corresponds to that condition as shown in the bills of quantities 31 at the lower left of drawing 9, that person is taken up as an infection pseudopositiveness person. It inspects to the infection pseudopositiveness person, and if an inspection result is positive, the barrier zone where the person entered a room from the zone accumulation record 17 of the person of the individual ID "123" further will be pinpointed, and those who enter the barrier zone and fulfill certain infection conditions will be extracted as an infection pseudopositiveness person. Thus, one high person of the possibility of infection after another is extracted, and expansion of a hospital infection can be prevented by inspecting those persons.
[0054]Next, drawing 10 is a flow chart of the processing which assumes the source of infection from the zone accumulation record 17. When two or more infected persons are reported, each infected person's individual ID is inputted from the input device of the prevention-of-transmission client 21 (drawing 10, S41).
[0055]The zone accumulation record 17 is searched by using an infected person's individual ID as a key (S42). And the zone where the infected person entered a room is extracted (S43). If the barrier zone where the infected person entered a room is pinpointed,

the number of times at which the infected person dropped in for every barrier zone will be counted, and a common degree will assume a high barrier zone as the source of infection and an infection hazardous area (S44).

[0056]When two or more infected persons are reported by the above-mentioned processing, the high barrier zone of the possibility of the source of infection can be assumed because those infected persons extract the barrier zone which entered a room in common. Thereby, the source of infection can be pinpointed at an early stage, and expansion of a hospital infection can be prevented.

[0057]Drawing 11 is an explanatory view of the processing which assumes the source of infection from the zone accumulation record 17. When two or more infected persons are detected, the zone accumulation record 17 is searched by using an infected person's ID code as a key, the barrier zone where each infected person entered a room is extracted, and the bills of quantities 32 which totaled how many infected persons entered a room in the barrier zone where the infected person entered a room, and each barrier zone are created. Based on these bills of quantities 32, the high place of the degree common to two or more infected persons is assumed as the source of infection.

[0058]Next, drawing 12 is a flow chart of the processing which assumes the source of infection from the order data which show the medical contents to a patient. An infected person's individual ID is inputted from the input device of the prevention-of-transmission client 21 (drawing 12, S51). Next, the order data 19 are searched by using an infected person's individual ID as a key (S52). The information about the contents of a patient's prescription, the contents of a therapy and the inspection, the medical device used for it, etc. is included in the order data 19.

[0059]Two or more infected persons' order data are accumulated (S53), the number of times carried out by the infected person according to order is counted, and the high order of a common degree is assumed as the source of infection (S54).

[0060]That is, it is investigated whether the degree currently carried out in common in the drugs given to two or more infected persons, the therapeutic method, and the inspection method is investigated, and there is any possibility of contamination into the drugs used by the order, a therapeutic method, etc. supposing the high thing of the degree currently carried out in common as the source of infection. Since the measures against pinpointing the source of infection for a short time, and intercepting the source of infection etc. can be taken by this when infection has occurred by the therapy to a patient, a hospital infection can be beforehand prevented from being expanded.

[0061]Drawing 13 is an explanatory view of the processing which assumes the source of infection from order data. When two or more infected persons are reported, the order data 19 are searched by using each infected person's ID code as a key, and each infected person's order is extracted.

[0062]The order data 19 comprise the time and a patient's individual ID which carried out order classification, such as supply of food, injection, and blood transfusion, and details

(the contents of order) and order, as shown in drawing 13. By using a patient's individual ID as a key and searching these order data 19, all the medical contents including the meal given to the one patient can be grasped. And by creating the bills of quantities 33 which totaled the contents of each patient's order, the order which is common in an infected person at a high rate can be specified, and the order can be assumed as the source of infection.

[0063]Next, the program based on the hospital infection preventing method which drawing 14 mentioned above, It memorizes to the portable recording media 41, such as CD-ROM and a floppy (registered trademark) disk, or the memory storage 44 which a program donor has, and is an explanatory view in the case of loading the program to a user's information processor 42, and executing it.

[0064]When the hospital infection preventive program is recorded on the portable recording media 41, such as CD-ROM and a floppy disk, The portable recording medium 41 is inserted in the drive device of the information processor 42, a program is read, the read program is stored in the memory storage 43, such as RAM and a hard disk, and a program is executed. When a program is provided via a communication line from a program donor, The information processor 42 receives the program stored in a program donor's memory storage 44, a memory, etc. via a communication line, and the received program is stored in the memory storage 43, such as RAM and a hard disk, and is executed. The program recorded on the portable recording medium 41 may have a function of a part of program described by the embodiment.

[0065]According to the embodiment mentioned above, a hospital etc. are divided into two or more barrier zones, and a hospital infection can be prevented from an infected person contacting an inpatient, an outpatient, a visitor, etc. and occurring by setting up beforehand the conditions which can enter each barrier zone. Those who are easily suffered from an infectious disease can be protected from a hospital infection by establishing the mechanism of restricting those who can enter the barrier zone in which the low newborn infant of immunity, the patient after an operation, etc. are present.

[0066]By recording the entrance record (zone accumulation record 17) which consists of a person who entered each barrier zone, time, etc., when an infected person is discovered, a person with the high possibility of secondary infection can be specified correctly in a short time. And expansion of a hospital infection can be prevented because possible positive [of secondary infection] inspects at an early stage to a pseudopositive high person.

[0067]Since the degree which those persons were common in the barrier zone which has entered a room in common, and has entered a room from two or more infected persons' zone accumulation record 17 can be known, the high place of a common degree can be assumed as a place where the possibility of the source of infection is high. And by investigating the existence of contamination of the assumed source of infection, the source of infection can be pinpointed in a short time, and expansion of infection can be prevented.

[0068]The high order (drugs, a therapeutic method, etc.) of the degree common to those infected persons can be investigated from two or more infected persons' order data 19, and the high thing of the possibility as the source of infection can be extracted out of order. Thereby, expansion of infection by drugs, a blood product, etc. which are specified by the prescription can be prevented.
[0069]Although the server client system which serves as the barrier zone system server 18 and the ordering system server 20 from prevention-of-transmission client 21 grade constituted the barrier zone system of the embodiment mentioned above, Not only the system of S aba K lein and form but a system configuration may be arbitrary. F or example, the prevention-of-transmission client 21 manages all the information, and it may be made to pinpoint an infection pseudopositiveness person, the source of infection, etc.
[0070]The information on the personal information 13, the judgment parameter 14, and zone accumulation record 17 grade may combine not only a data configuration that was stated to the embodiment but two or more those information, and is good also considering the whole as one information.
[0071]The IC card of not only a noncontact type but a contact process, a magnetic card, etc. may be sufficient as IC card 10 for recording the person who entered the barrier zone. As long as it can specify not only the thing of card shape but an entered person, what kind of device or a method may be used. F or example, the physical feature of individuals, such as a fingerprint, is identified and it may be made to record an entered person.
(Additional remark 1) A hospital infection preventing method managing the personal information of the visitor to medical facilities, dividing medical facilities into two or more barrier zones, setting up entrance conditions for said every barrier zone, and restricting the entrance into a room to said barrier zone of said visitor based on said personal information and said entrance conditions.
(Additional remark 2) Manage the personal information of the visitor to medical facilities, and medical facilities are divided into two or more barrier zones, A hospital infection preventing method characterized by assuming an infection pseudopositiveness person based on said infected person's entrance record, and said visitor's entrance record when entrance into a room of said visitor to each barrier zone is recorded and an infected person is reported.
(Additional remark 3) A hospital infection preventing method characterized by assuming the source of infection from two or more infected persons' entrance record when manage the personal information of the visitor to medical facilities, medical facilities are divided into two or more barrier zones, entrance into a room of said visitor to each barrier zone is recorded and an infected person is reported.
(Additional remark 4) A hospital infection preventing method recording the contents of a therapy to a patient, extracting the contents of a therapy common to the case where an infected person is reported, at two or more infected persons' contents of a therapy out of said patient, and assuming the source of infection from said extracted contents of a

therapy.
(Additional remark 5) A hospital infection preventing method of the additional remark 1 statement characterized by assuming an infection pseudopositiveness person based on said infected person's entrance record, and said visitor's entrance record when an infected person is reported.
(Additional remark 6) A hospital infection preventing method of the additional remark 1 statement characterized by assuming the source of infection from two or more infected persons' entrance record when an infected person is reported.
(Additional remark 7) Manage the personal information of the visitor to medical facilities, and medical facilities are divided into two or more barrier zones, A hospital infection preventing method extracting the entered person to the barrier zone assumed to be the source of infection from two or more infected persons' entrance record supposing the source of infection from entrance record, and assuming an infection pseudopositiveness person when entrance into a room of said visitor to each barrier zone is recorded and an infected person is reported.
(Additional remark 8) The function to manage the personal information of the visitor to medical facilities, and when medical facilities are divided into two or more barrier zones, A hospital infection preventive program which realizes the function to restrict the entrance into a room to said barrier zone of said visitor based on the function to set up entrance conditions for every barrier zone, and personal information and said entrance conditions and in which computer execution is possible.
(Additional remark 9) The function to manage the personal information of the visitor to medical facilities, and when medical facilities are divided into two or more barrier zones, A hospital infection preventive program which realizes the function which records entrance into a room of said visitor to said barrier zone, and the function to assume an infection pseudopositiveness person based on said infected person's entrance record, and said visitor's entrance record when an infected person is reported and in which computer execution is possible.
(Additional remark 10) A setting-out means to set up entrance conditions to a barrier zone when medical facilities are divided into two or more barrier zones, A hospital infection prevention device provided with the control means which restricts the entrance into a room to said barrier zone of said visitor based on medical facilities' personal information and said entrance conditions of a visitor.
(Additional remark 11) The function to manage the personal information of the visitor to medical facilities, and the function which divides medical facilities into two or more barrier zones, and records entrance into a room of said visitor to each barrier zone, A hospital infection preventive program which realizes the function to assume the source of infection from two or more infected persons' entrance record when an infected person is reported and in which computer execution is possible.
(Additional remark 12) A hospital infection preventive program which realizes the function

to extract the contents of a therapy common to the case where an infected person is reported, by two or more infected persons' contents of a therapy out of said patient, and to assume the source of infection to be a function which records the contents of a therapy to a patient from said extracted contents of a therapy and in which computer execution is possible.

(Additional remark 13) Make the personal information of the visitor to medical facilities manage, and medical facilities are divided into two or more barrier zones, The recording medium which recorded the hospital infection preventive program to which entrance conditions are made to set for said every barrier zone, and the entrance into a room to said barrier zone of said visitor is made to restrict based on said personal information and said entrance conditions and in which computer reading is possible.

(Additional remark 14) Make the personal information of the visitor to medical facilities manage, and medical facilities are divided into two or more barrier zones, The recording medium which recorded the hospital infection preventive program which makes an infection pseudopositiveness person assume based on said infected person's entrance record, and said visitor's entrance record when entrance into a room of said visitor to each barrier zone was made to record and an infected person was reported and in which computer reading is possible.

(Additional remark 15) Make the personal information of the visitor to medical facilities manage, and medical facilities are divided into two or more barrier zones, The recording medium which recorded the hospital infection preventive program which makes the source of infection assume from two or more infected persons' entrance record when entrance into a room of said visitor to each barrier zone was made to record and an infected person was reported and in which computer reading is possible.

(Additional remark 16) The recording medium which made the contents of a therapy to a patient record, and recorded the hospital infection preventive program which makes the contents of a therapy common to the case where an infected person is reported extract by two or more infected persons' contents of a therapy out of said patient, and makes the source of infection assume from said extracted contents of a therapy and in which computer reading is possible.

(Additional remark 17) The hospital infection preventing method, the hospital infection preventive program, hospital infection prevention device, or recording medium of any one statement of claim 1 thru/or 16, wherein said personal information includes the information which shows the existence of the infection to an infectious disease.

(Additional remark 18) As information which pinpoints a barrier zone, the information which shows the ID information of a barrier zone and the place in a hospital is memorized, Match said visitor's entrance record with the information which shows the ID information of said barrier zone, and the place in a hospital, and it is recorded, A hospital infection preventing method of any one statement of the additional remark 1 thru/or 7 it was made to have said visitor's entrance record, and the changed barrier zone matched also when the place of a

barrier zone was changed.
(Additional remark 19) The information which shows the ID information of said barrier zone and the place in a hospital as said visitor's entrance record, said visitor's ID information, entrance time, and recession time are recorded, A hospital infection preventing method of any one statement of the additional remark 1 thru/or 7 which assumes an infection pseudopositiveness person or the source of infection from said infected person's entrance record, and a visitor's entrance record when an infected person is reported.
(Additional remark 20) The hospital infection prevention system of any one statement of the additional remark 1 thru/or 7 by which said visitor's personal information consists of the ID information which specifies an individual, information which shows the contents of a visitor's infectious disease, and information which shows the barrier zone where entrance into a room is restricted.
[0072]
[Effect of the Invention]According to this invention, the secondary infection from an infected person can be prevented with restricting the entrance into a room to a barrier zone by a visitor's personal information and entrance conditions. Since the high person of a possibility of being infected directly or indirectly can be extracted from the infected person as an infection pseudopositiveness person when an infected person is reported, an infected person can be inspected in a short time, and expansion of infection can be prevented. By assuming the source of infection from record of the barrier zone which entered a room in common with the case where an infected person is reported, two or more infected persons pinpoint the high place of the possibility of the source of infection, and can prevent expansion of infection by interception of the source of infection, etc. Since the possible high drugs of the source of infection, a medical device, etc. can be narrowed down from the contents of a therapy to an infected person when an infected person is reported, the source of infection is pinpointed and expansion of a hospital infection can be prevented.

[Translation done.]

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is a figure showing the system configuration of a barrier zone system.

[Drawing 2] It is a figure showing the information used with a barrier zone system.

[Drawing 3] It is a figure showing a barrier zone.

[Drawing 4] It is a figure showing operation of the outline of a barrier zone system.

[Drawing 5] It is a flow chart of the processing which restricts the entrance into a room to a barrier zone.

[Drawing 6] It is an explanatory view of the processing which restricts the entrance into a room to a barrier zone.

[Drawing 7] It is a figure showing an example of a judgment parameter.

[Drawing 8] It is a flow chart of processing supposing an infection pseudopositiveness person.

[Drawing 9] It is an explanatory view of processing supposing an infection pseudopositiveness person.

[Drawing 10] It is a flow chart of the processing which assumes the source of infection from zone accumulation record.

[Drawing 11] It is an explanatory view of the processing which assumes the source of infection from zone accumulation record.

[Drawing 12] It is a flow chart of the processing which assumes the source of infection from order data.

[Drawing 13] It is an explanatory view of the processing which assumes the source of infection from order data.

[Drawing 14] It is an explanatory view of a recording medium.

[Description of Notations]

10 IC card
11 IC card reader
12 Gate control client
13 Personal information

14 Judgment parameter
15 Zone information
16 Infection condition information
17 Zone accumulation record
18 Barrier zone system server
19 Order data
20 Ordering system server
21 Prevention-of-transmission client
22 LAN of the House

[Translation done.]